

# Wheat Exome Kit

Status Update  
*IWGSC Business Meeting,  
PAG XXVIII (January 2020)*

PRESENTED BY:





myBaits Expert — Predesigned Panels

# myBaits Expert Wheat Exome

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## Enrich for over 250 megabases of high-confidence exons from a wide variety of wheat cultivars.

The new myBaits<sup>®</sup> Expert Wheat Exome panel was developed in collaboration with the International Wheat Genome Sequencing Consortium (IWGSC) using the most up to date genome assembly and annotation set of Chinese Spring. The panel enriches for the complete high-confidence exon-annotated genome in hexaploid wheat, retrieving over 250 megabases of CDS and CDS-proximate regions of the greater than 15 GB *Triticum aestivum* genome.



### EXOME SEQUENCING

Interested in developing a customized exome panel for another plant or animal species? Contact our experts today!

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# Crop Research So

From Sample-to-Insight

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## Arbor Biosciences Partners with Curio Genomics for Analysis of IWGSC Wheat Exome

Ann Arbor, Michigan July 16, 2019 – Arbor Biosciences, a division of Chiral Technologies, Inc and worldwide leader in next generation sequencing (NGS) target enrichment, announces a partnership with Curio Genomics for bioinformatics analysis of the wheat genome. Arbor has an ongoing collaboration with the International Wheat Genome Sequencing Consortium (IWGSC), an international organization dedicated to developing a



### W693 Alignment, Analysis, and Visualization of Wheat NGS Samples in Curio

2:50 @ Tuesday workshop

#### Details

**Session:** IWGSC – Wheat Genome Manual and Functional Annotation  
**Location:** Pacific Salon 2  
**Date:** Tuesday, Jan 14 2:50 PM  
**Duration:** 20 minutes

#### Speakers

**Presenting Author**  
Shawn Quinn  
Curio Genomics

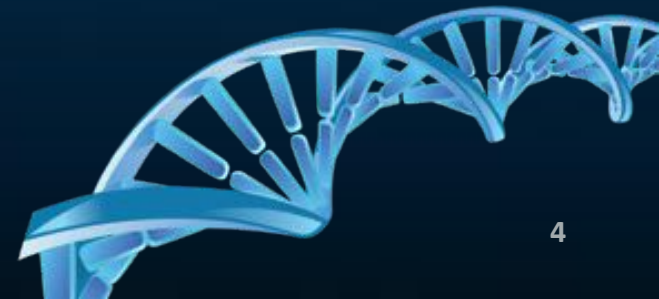




## Tetraploids performance

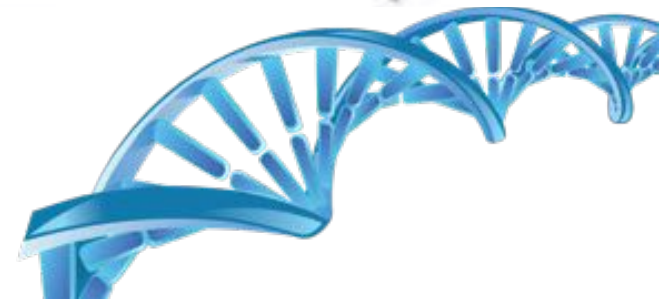
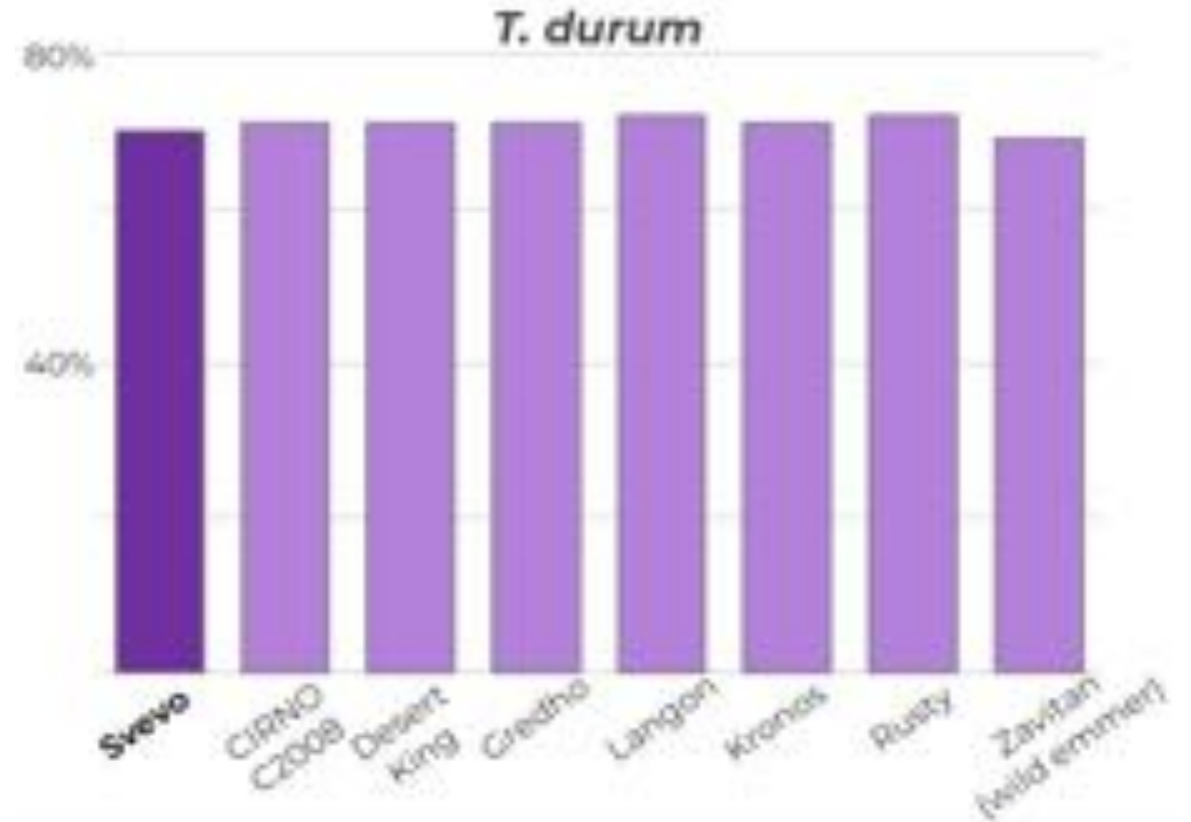
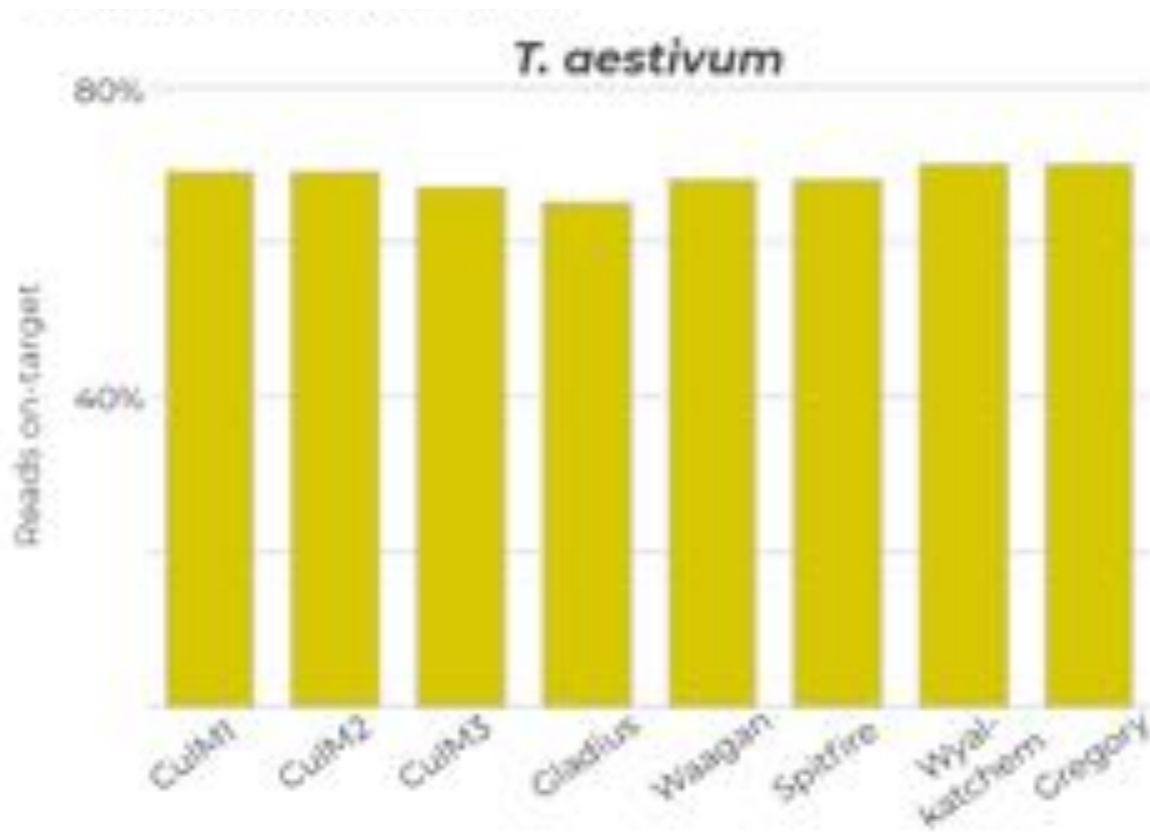


Thanks  
Jorge!



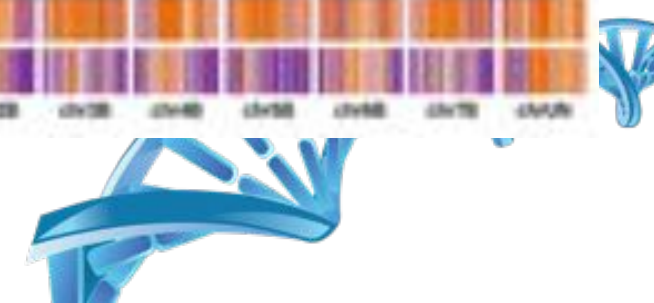
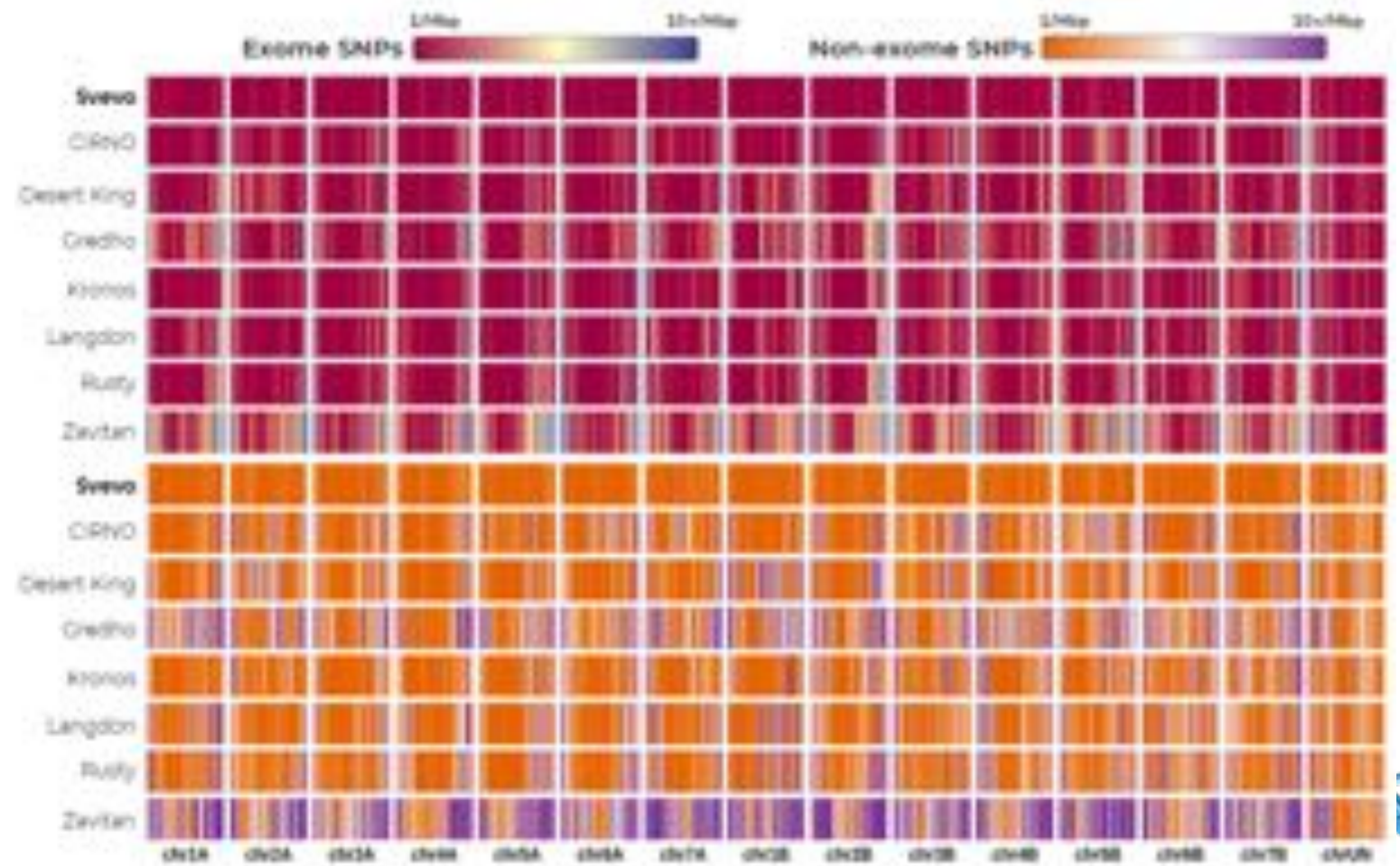
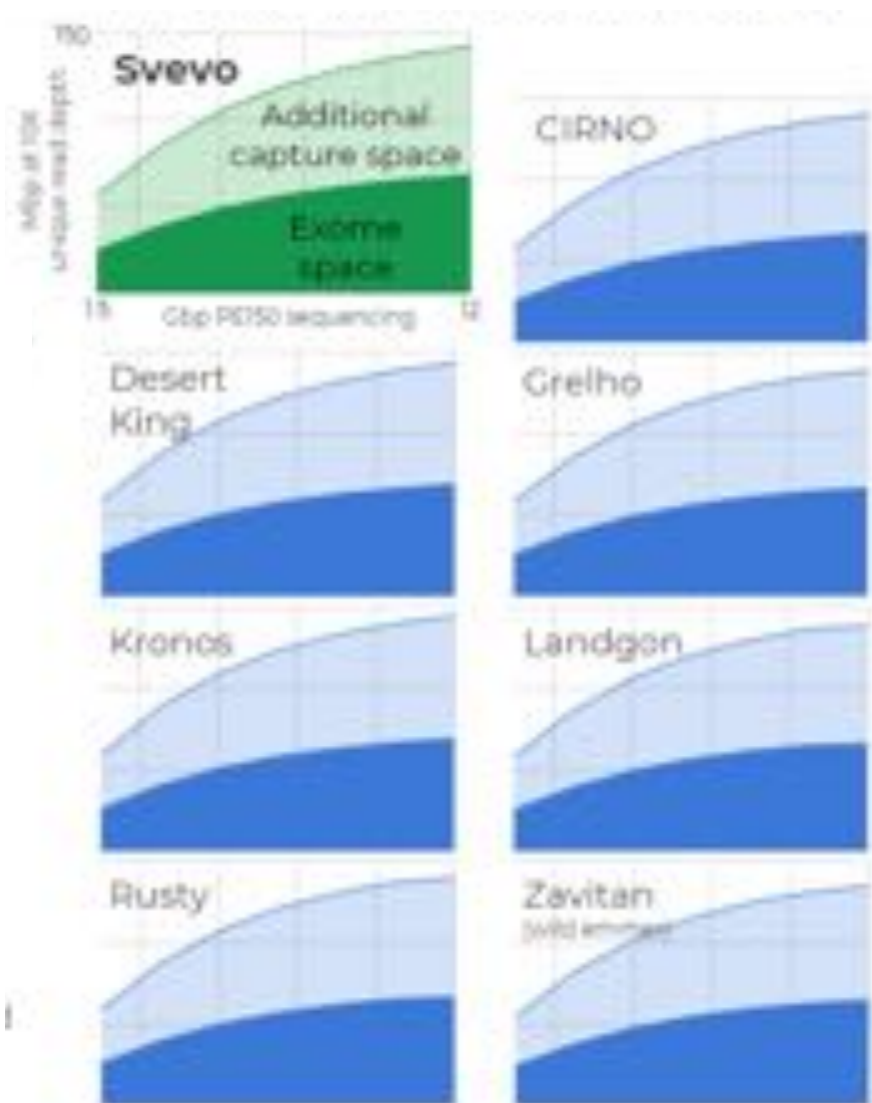
# Kit performance with tetraploids

## Mapping to Chinese Spring



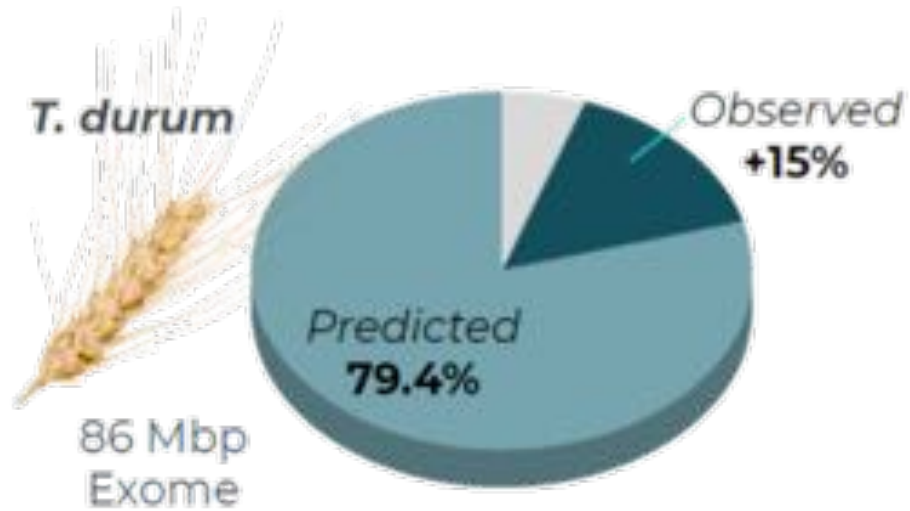
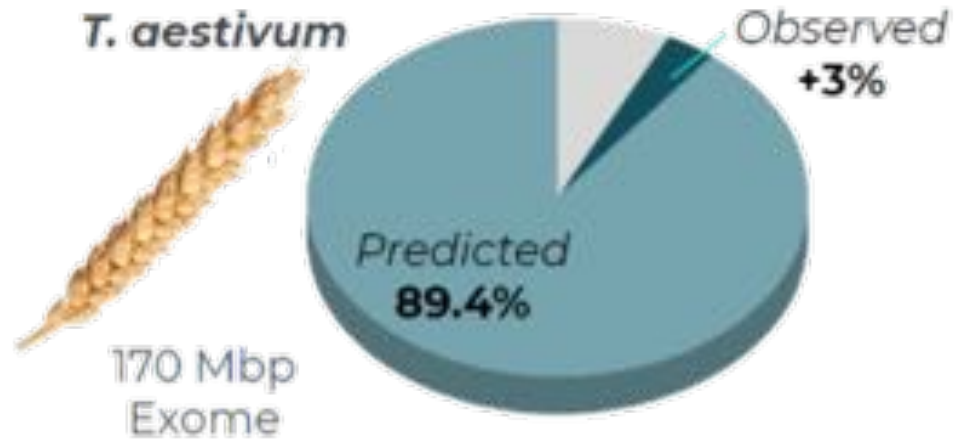
# Kit performance with tetraploids

Mapping to Svevo - 57 to 61% on-target



# Multi-taxon utility

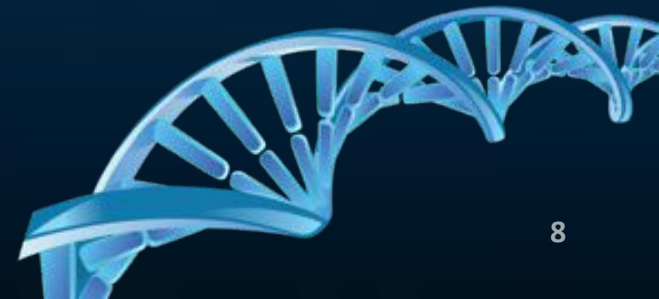
## Retrievable Exome Portion



# Wheat Exome Kit v1



## Promoters module



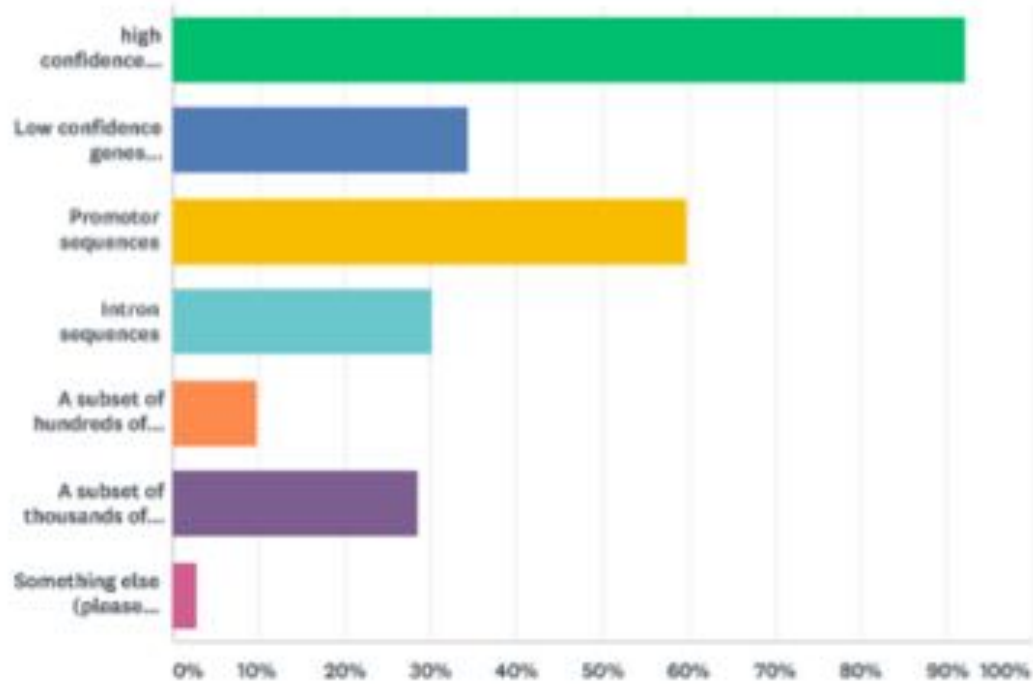


# Promoter capture module next



Q2 What components of a wheat exome capture would be valuable for your work?

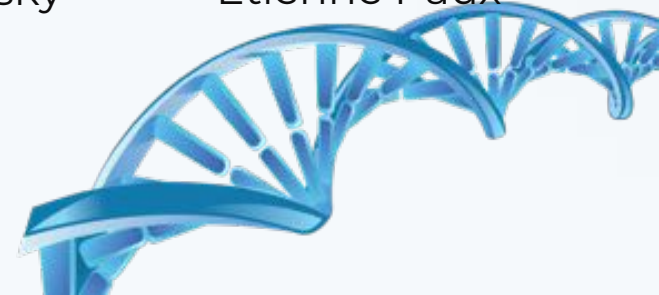
Answered: 102 Skipped: 3



Jorge Dubcovsky



Etienne Paux



# Promoter capture composition

Development is accelerated



## Putative promoter regions

- + Existing capture performance data
- + ATAC-seq-identified regions
- kmer-based repeat filtration

**180 Mbp**

***Synthesis starts in February***



*Thanks!*



**web** [www.arborbiosci.com](http://www.arborbiosci.com)

**email** [info@arborbiosci.com](mailto:info@arborbiosci.com)

**phone** 1-734-998-0751

**twitter** @ArborBio